

U.S. ENVIRONMENTAL PROTECTION AGENCY  
POLLUTION/SITUATION REPORT  
ASIG Sand Island - Removal Polrep



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
Region IX

**Subject:** POLREP #5  
ASIG Sand Island  
Z9EA  
Honolulu, HI  
Latitude: 21.3168235 Longitude: -157.8900084

**To:** Harry Allen, EPA Region 9  
Enrique Manzanilla, EPA Region 9  
Daniel Meer, EPA Region 9

**From:** Donn Zuroski, OSC

**Date:** 2/11/2015

**Reporting Period:** 2/6/2015 - 2/11/2015

1. Introduction

1.1 Background

|                            |           |                                |                |
|----------------------------|-----------|--------------------------------|----------------|
| <b>Site Number:</b>        | Z9EA      | <b>Contract Number:</b>        |                |
| <b>D.O. Number:</b>        |           | <b>Action Memo Date:</b>       |                |
| <b>Response Authority:</b> | OPA       | <b>Response Type:</b>          | Emergency      |
| <b>Response Lead:</b>      | EPA       | <b>Incident Category:</b>      | Removal Action |
| <b>NPL Status:</b>         |           | <b>Operable Unit:</b>          |                |
| <b>Mobilization Date:</b>  | 1/25/2015 | <b>Start Date:</b>             | 1/25/2015      |
| <b>Demob Date:</b>         |           | <b>Completion Date:</b>        |                |
| <b>CERCLIS ID:</b>         |           | <b>RCRIS ID:</b>               |                |
| <b>ERNS No.:</b>           |           | <b>State Notification:</b>     |                |
| <b>FPN#:</b>               | E15901    | <b>Reimbursable Account #:</b> |                |

1.1.1 Incident Category  
OPA Response

1.1.2 Site Description

The site includes the area in and adjacent to the tank farm that supplies fuel to the Honolulu International Airport. This tank farm facility includes 16 above ground storage tanks (used to store Jet a fuel) and pipelines to receive product form the Kapolei Refinery (located in Campbell Industrial Park) or product directly from oil tankers in Honolulu Harbor, as well as pipelines running form the tank farm directly to the airport. The tank farm sits on land owned by the State of Hawaii Department of Transportation Airports Division. The tanks, piping, structures and associated equipment are owned by Hawaii Fueling Facilities Corporation a consortium of (22?) airlines. The facility is operated by aircraft Service International group (ASIG).

1.1.2.1 Location

The tank farm is situated on the main road between Honolulu and Sand Island. Honolulu Harbor and Ke'ehi Lagoon are both in near proximity. A smaller tank farm operated by Hawaiian Independent Energy Co. is located adjacent to the South.

1.1.2.2 Description of Threat

On December 22, 2014, the staff at the ASIG tank farm noted a substantial shortage in the inventory of Tank #2. The storage capacity of tank #2 is approximately 2.8 million gallons. Over the course of the next month, ASIG conducted a series of tests and an internal investigation of the tank. This included transfer of the jet fuel to the airport tank farm, venting and cleaning the tank in question, locating the area of concern on the tank bottom, and cut out of a coupon on the floor. Once the coupon was removed ASIG found that the area below the tank was saturated with fuel. They then notified the NRC and the HI DOH HEER office that they had a release of 1000 bbls of Jet fuel (42,000 gallons) at their facility.

1.1.3 Preliminary Removal Assessment/Removal Site Inspection Results

Upon notification from ASIG (January 22, 2015) the HI DOH Hazard Evaluation and Emergency Response Office (HEER) deployed one of the State On-Scene Coordinators (SOSC) to the facility. The SOSC evaluated the situation on site and immediately notified the EPA Region 9 duty officer.

## **2. Current Activities**

### **2.1 Operations Section**

#### **2.1.1 Narrative**

This facility is adjacent to both Honolulu Harbor and Ke'ehi Lagoon, and has a history of tank releases. The tank farm contains 16 ASTs with a combined capacity to hold 44 million gallons of fuel. Although the facility is surrounded along the perimeter by a concrete wall, the area around the tanks is not paved or sealed from downward migration of fuel should it get out of the tanks. The soil underlying the tanks is sand with layers of crushed coral and fill material. The water table beneath the facility is tidally influenced. In 1996, there was a sizable tank release inside the facility. In 2008, there was (another) release from piping/appurtenances related to a tank or tank, again inside the facility. As a result of the 2008, event the facility owners installed a bentonite slurry barrier wall along 3,000 linear feet of the perimeter.

According to the engineering firm that installed the barrier wall, "this barrier system will last for centuries". However, a substantial amount of jet fuel has escaped the slurry wall and has been found (on the water table) outside the tank farm, within 50 yards of Ke'ehi Marina.

At present, the Jet fuel is being pumped from four extraction trenches and a few small open pits inside the tank farm, and several locations outside the tank farm, directly into vac trucks. The vac truck loads are taken offsite for processing at the Honolulu Airport fuel storage farm. An average of 1,000 gallons of pure jet fuel per day have been recovered.

#### **2.1.2 Response Actions to Date**

ERT, the (EPA) FOSC, the SOSC, and the RP have established a nimble and effective Unified Command approach to issue shaping and problem solving. ERT and the OSC are closely observing and directing the placement and construction of extraction trenches/wells/pits/sumps. As a result of the (Unified Command) collaborative approach to solving technical problems, the design and installation of the capture and extraction system and monitoring wells is revised and refined daily. Furthermore, there are few surprises or unavoidable delays.

Numerous exploratory trenches and bore holes, as well as four extraction trenches and several extraction and monitoring wells have been installed inside the tank farm. More than fifty exploratory bore holes, multiple monitoring wells and six extraction sump/wells have been installed outside the tank farm. In order to ensure that no possible path for the jet fuel to reach the water is unattended, the RP has installed boom along the water's edge in the area of concern and is monitoring it closely for evidence of any releases.

At the end of each day the Unified Command holds a debrief and has a "brainstorming" session to develop the path forward for the next day's effort. Careful attention is being paid to ensure that the emergency response actions are consistent with the long-term remedy.

Development of a strategy to capture the fuel, and the design of an interceptor trench to insure that the jet fuel plume does not reach the water's edge, are completed.

#### **2/6/15**

ERT, FOSC, six START, SOSC are on site. The FOSC conducts the morning safety briefing along with the RP response contractor. START continues the DLNR air monitoring program. Geoprobe operations continue outside the tank farm. Two bore holes are converted to monitoring wells and two bore holes are converted to potential extraction wells. Extraction trench #4 is completed inside the tank farm. Capture and removal of jet fuel both inside and outside the tank farm continues. Visual monitoring of the boom continues. The FOSC begins the review of the workplan submitted by the RP on 2/5/15 (as per the CWA 311 Order schedule).

#### **2/7/15**

ERT, FOSC, three START are on site. The FOSC conducts the morning safety briefing along with the RP response contractor. START continues the DLNR air monitoring program. Geoprobe operations continue outside the tank farm. Two bore holes are converted to monitoring wells and two bore holes are converted to potential extraction wells. The FOSC and ERT determine that the hollow stem auger extraction well installation method does not result in wells that communicate effectively with the formation due to smearing of clay in the borehole. The monitoring well installation method will be limited to either air knife bore holes or Geoprobe direct push bore holes. The extraction wells will be installed as a backhoe dug sump/well. Capture and removal of jet fuel both inside and outside the tank farm continues. Visual monitoring of the boom continues.

#### **2/8/15**

ERT, FOSC, two START are on site. The FOSC conducts the morning safety briefing along with the RP response contractor. START continues the DLNR air monitoring program. Capture and removal of jet fuel both inside and outside the tank farm continues. Visual monitoring of the boom continues.

#### **2/9/15**

ERT, the FOSC, four START, the SOSC, and the DOH RPM are on site. The FOSC conducts the morning safety briefing along with the RP response contractor. START continues the DLNR air monitoring program. The FOSC, the SOSC and the DOH RPM meet with DLNR to discuss placement of a bentonite barrier around the buried waterline running along the north edge of the tank farm. Backhoe installation of extraction sump/wells commences outside the tank farm. The new design of the extraction sump/well proves to be quite effective in capturing the jet fuel. Capture and removal of jet fuel both inside and outside the tank farm continues. Visual monitoring of the boom continues.

#### **2/10/15**

ERT, the FOSC, four START, the SOSC are on site. The FOSC conducts the morning safety briefing along with the RP response contractor. START continues the DLNR air monitoring program. Backhoe installation of extraction sump/wells continues outside the tank farm. A concrete corer bores multiple holes in the

concrete footer for the perimeter wall inside the tank farm. These locations will become extraction wells to be installed in bore holes created with the air knife. Capture and removal of jet fuel both inside and outside the tank farm continues. Visual monitoring of the boom continues. The FOSC submits comments on the RP's workplan.

#### **2/11/15**

ERT, the FOSC, four START, SOSC, and the DOH RPM are on site. The FOSC conducts the morning safety briefing along with the RP response contractor. START continues the DLNR air monitoring program. The FOSC, ERT and the SOSC meet with the RP and the RP's contractor to discuss the EPA comments on the work plan and to further refine the path forward. Backhoe installation of extraction sump/wells continues inside the tank farm. Three extraction wells are installed inside the tank farm along the perimeter wall (in the locations that were cored through the footing). Capture and removal of jet fuel both inside and outside the tank farm continues. Visual monitoring of the boom continues.

#### **2.1.3 Enforcement Activities, Identity of Potentially Responsible Parties (PRPs)**

Verbal Notice of Federal Interest was given by the OSC on his arrival at the site. The hard copy of the NOFI was hand delivered on 1/27/15. A CWA 311(c) order was issued and hand delivered by the OSC on 1/30/15. Further Federal enforcement actions are TBD.

#### **2.1.4 Progress Metrics**

Estimates of recovered jet fuel have been revised downward due the continued dewatering of the extracted liquid.

| <i>Waste Stream</i> | <i>Medium</i> | <i>Quantity</i> | <i>Manifest #</i> | <i>Treatment</i> | <i>Disposal</i> |
|---------------------|---------------|-----------------|-------------------|------------------|-----------------|
| jet fuel            | pure          | approx.22,000g  |                   | oi/water sep     | re-use          |
|                     |               |                 |                   |                  |                 |
|                     |               |                 |                   |                  |                 |

### **2.2 Planning Section**

#### **2.2.1 Anticipated Activities**

The initial approach has been to aggressively extract the jet fuel, to define the extent of the subsurface release, and to design and install engineered capture and monitoring systems to be operated over the long term.

ASIG has installed four extraction trenches, and multiple extraction wells and sumps inside the tank farm, several extraction sump/wells outside the tank farm, and has continued aggressive removal of the jet fuel from these engineered systems.

The extent of the subsurface plume is still under study, but enough information has been collected to initiate recovery from sump/wells installed outside the tank farm.

The extraction wells and trenches inside the tank farm are completed. The infrastructure to utilize an automatic pumping system in the trenches is under construction. In the interim, vac trucks are used to remove the jet fuel that has been captured in the trenches.

The design of the system to extract the fuel outside the tank farm is soon to be finalized. At present, vac trucks are utilized to remove jet fuel from bore holes and the sump/well system outside the tank farm.

An interceptor trench is under design and will be installed the full length of the area of concern between the extraction trenches and the water front.

##### **2.2.1.1 Planned Response Activities**

Contain the release. Complete installation of systems both inside and outside the tank farm to capture and remove the jet fuel. Construct a permanent interceptor trench to ensure that the fuel is kept from reaching the marina. Develop and implement a long term monitoring plan.

##### **2.2.1.2 Next Steps**

Further refine the long-term strategy.

##### **2.2.2 Issues**

TBD

### **2.3 Logistics Section**

No information available at this time.

### **2.4 Finance Section**

#### **2.4.1 Narrative**

The FPN is funded at \$150k.

### **2.5 Other Command Staff**

No information available at this time.

### **3. Participating Entities**

#### **3.1 Unified Command**

EPA  
HI DOH  
ASIG

#### **3.2 Cooperating Agencies**

USCG Sector Honolulu  
HI HEER Office  
HI DOH  
HI DLNR  
HFD

### **4. Personnel On Site**

No information available at this time.

### **5. Definition of Terms**

No information available at this time.

### **6. Additional sources of information**

No information available at this time.

### **7. Situational Reference Materials**

No information available at this time.

POLREP #5 Last Updated 9/21/2016